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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,920	10/22/2003	Donald E. Mosing	FRK-102	6867

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THE MATTHEWS FIRM
2000 BERING DRIVE
SUITE 700
HOUSTON, TX 77057

EXAMINER	
NICHOLSON, ERIC K	

ART UNIT	PAPER NUMBER
3679	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/690,920	MOSING ET AL.	
	Examiner	Art Unit	
	Eric K Nicholson	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,10,12-15,17-21,23,24,26-39,51,53-61,63-66,68,69,72 and 73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10,12-15,17-21,23,24,26-39,51,53-61,63-66,68,69,72 and 73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections –35 USC § 112

Claims 37-39 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 37, "the shoulders" lacks proper antecedent basis.

Claim Rejections – 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,4,5,7,10,12,14,18,20,23,24,26,27,29,34,35,37,39,51,52,54-55,60,61,63,68,69,72 and 73 are rejected under 35 U.S.C. j 102(b) as being anticipated by U.S. patent 1,507,877 to Wilson. The Wilson coupling illustrates and teaches a connection for assembly of with a first pipe 16 having a female end 14, a second pipe 12 having a male end 10 wherein the female end has an inner surface and an outer surface and the male end has an inner surface and an outer surface. A first plurality of protuberances 21 circumferentially and longitudinally spaced relative to each other about the inner surface of said female end and a second plurality of protuberances 20 circumferentially and longitudinally spaced relative to each

other about the outer surface of said male end. The circumferential spacing forms a circumferential array having at least one longitudinal column on both the inner surface of said female end and the outer surface of said male end. The arrays are aligned such that said plurality of protuberances are accepted by a mating pipe end when said male and female pipe ends move relative to each other for forming a connection and wherein the male and female ends engage upon any rotation of one pipe relative to the other pipe wherein such rotation causes said protuberances of the male end and said protuberances of the female end to move circumferentially with respect to each other. The male and female ends are attached to the pipe via threads l 1 and l 5 and the protuberances are produced via an interrupted and tapered screw thread of which the protuberances include a lead angle. Also the connection includes conical abutment surfaces 23,24 at one end of the threads and 25,26 at the other end and further the interrupted threads 20,21 themselves form abutment surfaces with each other. Further, the interrupted thread can be viewed as cam patches wherein the threads are arcuate cams (see figs. 3 and 4) and the protuberances are radially captured as they are covered by the slots and thereby prevent radial expansion of the female end relative to the male end.

Claims 1-5,7,9,10,12-15,17-21,23,24,26-39,51,52,54-61,63-66,68,69,72 and 73 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent 6,283,51 1 to Kamp. The Kamp coupling illustrates and teaches a connection for assembly of with a first pipe 52 having a female end 54, a second pipe 2 having a male end 9 wherein the female end has an inner surface and an outer surface and the male end has an inner surface and an outer surface. A first plurality of protuberances 70-77

circumferentially and longitudinally spaced relative to each other about the inner surface of said female end and a second plurality of protuberances 5 circumferentially and longitudinally spaced relative to each other about the outer surface of the male end. As noted on column 5, lines 64-67 continuing to column 6, lines 1-5 the columns can be odd (three) or even (two) or other numbers of columns can be provided". The circumferential spacing forms a circumferential array having at least one longitudinal column on both the inner surface of said female end and the outer surface of said male end. The arrays are aligned such that said plurality of protuberances are accepted by a mating pipe end when said male and female pipe ends move relative to each other for forming a connection and wherein the male and female ends engage upon any rotation of one pipe relative to the other pipe wherein such rotation causes said protuberances of the male end and said protuberances of the female end to move circumferentially with respect to each other. See column 6-8 which discuss how the connection is made and the various shapes and angles to which the slots and protuberances can be made. The protuberances are produced via an interrupted and straight screw thread of which the protuberances include a lead angle. Also the connection includes abutment surfaces 7,57 at one end of the threads and 20,86 at the other end and further the interrupted threads as illustrated in figs. 6 and 7 themselves form abutment surfaces with each other. Further, the interrupted thread can be viewed as cam patches wherein the threads are arcuate cams that extend around the circumference of the round male and female members. As to claim 38 the degree of rotation merely depends on the number of columns and/or the length of the slots and protuberances and since the Kamp coupling is clear that such features can be varied as needed or desired it is clear that Kamp thus anticipates the 20 degree ranges prescribed by claim 38 as such a range would fall well within a coupling with a high number of

columns of slots and protuberances. See surfaces 35 and 85 which engage limit rotation (column 1 1, lines 1-20). Further, the protuberances are radially captured as they are covered by the slots and thereby prevent radial expansion of the female end relative to the male end.

Claims 1,4-6,12,13,14,37,38 and 39 are rejected under 35 U.S.C. j 102(b) as being anticipated by U.S. patent 4,185,856 to McCaskill. The McCaskill coupling illustrates and teaches a connection for assembly of with a first pipe 20 welded to a female end 70, a second pipe 23 welded to a male end 60 wherein the female end has an inner surface and an outer surface and the male end has an inner surface and an outer surface. As shown in fig. 2 a first plurality of protuberances 76 circumferentially and longitudinally spaced relative to each other about the inner

surface of said female end and a second plurality of protuberances 66 circumferentially and longitudinally spaced relative to each other about the outer surface of said male end. The circumferential spacing forms a circumferential array having at least one longitudinal column on both the inner surface of said female end and the outer surface of said male end. The arrays are aligned such that said plurality of protuberances are accepted by a mating pipe end when said male and female pipe ends move relative to each other for forming a connection and wherein the male and female ends engage upon any rotation of one pipe relative to the other pipe wherein such rotation causes said protuberances of the male end and said protuberances of the female end to move circumferentially with respect to each other. As to claim 38 the degree of rotation merely depends on the number of columns and/or the length of the slots and protuberances and since the coupling shows a large number of slots and protuberances it is clear that the coupling

thus anticipates the 20 degree ranges prescribed by claim 38 as such a range would fall well within a coupling with a high number of columns of slots and protuberances.

Conclusion

Applicant's remarks have been considered however are not deemed to be persuasive. Applicant argues against the Wilson reference by stating that the conical abutment surfaces are not pulled into contact with each other due to the mating of the protuberances/patches. The examiner disagrees and points to page 2, lines 30-45 of Wilson where it is made clear that frictional contact is made between the surfaces 23/24,25/26 when the male pin is rotated in the female box and produces a wedging action thereby. These surfaces are clearly pulled into contact due to the angled engagement of the protuberances/patches 20,21 causing the male pin to enter further into the female box. Applicant states that the Kamp reference also does not provide abutment surfaces pulled into contact by the protuberances/patches. Again the examiner disagrees and points to abutment surfaces 7/57 (see fig. 3) and abutment surfaces 20/86 (see fig. 7). Frictional contact is made between these surfaces when the male pin is rotated in the female box and produces a wedging action thereby. These surfaces are clearly pulled into contact due to the angled engagement of the protuberances/patches 70-77 and 5 causing the male pin to enter further into the female box.

Applicant states that the McCaskill reference also does not provide abutment surfaces pulled into contact by the protuberances/patches. Again the examiner disagrees and points to abutment surfaces 68/72 (see column 3, lines 24-25) and abutment surfaces 78/90-92 (see fig.4). Frictional contact is made between these surfaces when the male pin is rotated in the female box and

produces a wedging action thereby. These surfaces are clearly pulled into contact due to the angled engagement of the thread protuberances/patches 66,76 causing the male pin to enter further into the female box.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Nicholson whose telephone number is (703) 308-0829. The examiner can normally be reached on Tuesdays thru Fridays from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola, can be reached on (703) 308-2686. The fax phone number for Technology Center 3600 is (703) 872-9306. Any inquiry of a general nature or relating to the

status of this application or proceeding should be directed to the Technology Center receptionist whose telephone number is (703) 308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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Eric K. Nicholson
Primary Examiner
Technology Center 3600